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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/800,518

03/15/2004

Se-Youn Lim

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10/01/2007

CHA & REITER, LLC

210 ROUTE 4 EAST STE 103

PARAMUS, NJ 07652

EXAMINER

LIU, BEN H

ART UNIT

PAPER NUMBER

2616

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DELIVERY MODE

10/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/800,518

Applicant(s)

LIM ET AL.

Examiner

Beh H. Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 21 August, 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 2-10, 13-16, and 19-22 are objected to because of the following informalities:

For claims 2-5, the phrase “so as to represent that” renders the claims unclear. It is unclear whether the limitations following the phrase are part of the claimed invention.

For claims 6-9, the phrase “which has” renders the claims unclear. It is unclear whether the limitations following the phrase are part of the claimed invention.

For claims 13-16, it appears the limitation “a payload of the GEM frame” in line 2 of each claim refers to the payload of “a GEM frame” in claim 10 line 7. If that is the case, it is suggested that the applicant change the phrase to “the payload of the GEM frame.”

For claims 19-22, it appears the limitation “a GEM frame header” in line 1 of each claim refers to “a header of the GEM frame” in claim 17 line 3. If that is the case, it is suggested that the applicant change the phrase to “the GEM frame header.”

Also for claims 19-22, it appears the limitation “a payload of the GEM frame” in line 2 of each claim refers to the payload of “a GPON encapsulation method (GEM) frame” in claim 17 line 2. If that is the case, it is suggested that the applicant change the phrase to “the payload of the GEM frame.”

For claim 19, it appears there is a redundant comma after the phrase “a control frame” in line 2. If that is the case, it is suggested that the applicant remove the redundant comma.

For claims 10 and 17, the phrase “whether or not” renders the claims unclear. It is unclear whether the limitations following the phrase are part of the claimed invention.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed towards non-statutory matter. Claims 1-9 are drawn to a data structure per se that merely manipulates data or an abstract idea without a limitation to a practical application in the technological arts.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harel et al. (U.S. Patent Application Publication 2004/0190548) in view of Stiscia et al. (U.S. Patent Application Publication 2004/0136534).

For claim 1, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the header portion includes values for discriminating between traffic to provide traffic multiplexing; the header further includes a payload type of a frame (see paragraph 98), wherein payload type information, which represents a data type of a payload of the frame, is displayed in the header, in order to provide a control frame that delivers management control information (see paragraph 36).

For claim 2, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the payload type information represents the data type of the payload of the frame so as to represent that the frame includes a control frame (see paragraph 36).

For claim 3, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the payload type information represents the data type of the payload of the frame so as to represent that the frame includes a TDM (Time Division Multiplex) data frame (see paragraphs 25-29).

For claim 4, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the payload type information represents the data type of the payload of the frame so as to represent that the frame includes an Ethernet data frame (see paragraph 24).

For claim 5, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the payload type information represents the data type of the payload of the frame so as to represent that the frame includes a control frame, a TDM (Time Division Multiplex) data frame, and an Ethernet data frame (see paragraphs 24-29 and 36).

For claims 6-9, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the header portion includes values for discriminating between traffic to provide traffic multiplexing; the header further includes a payload type of a frame (see paragraph 98), wherein payload type information, which represents a data type of a payload of the frame, is displayed in the header, in order to provide a control frame that delivers management control information (see paragraph 36). It is noted that reserved or predetermined fields with predetermined or no predetermined values for header information is common in the art.

For claim 10, Harel et al. discloses an encapsulation method of traffic over a packet network comprising the steps of: i) checking whether or not a received frame is an ATM frame (see paragraph 30); ii) transmitting the received frame in an ATM cell transmission method if the received frame is identified as the ATM frame in step i) (see paragraph 90); iii) checking

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whether or not the received frame is a data frame (see paragraph 27); iv) transferring the received frame while displaying a payload type thereof by performing a data encapsulation with respect to the received frame if the received frame is a data frame (see paragraph 98); and v) creating a control frame by using the received frame and transferring the control frame with representing the payload type thereof, if the received frame is not the data frame (see paragraphs 36 and 94).

For claim 11, Harel et al. discloses an encapsulation method of traffic over a packet network further comprising the steps of: vi) checking a transmission method of the received frame if the received frame is the data frame (see paragraph 27); vii) performing a TDM data encapsulation with respect to the received frame and transferring the received frame with representing the payload type thereof, if the transmission method confirmed in step vi) is a TDM method (see paragraphs 25-29); and viii) performing an Ethernet data encapsulation with respect to the received frame and transferring the received frame with representing the payload type thereof, if the transmission method checked in step vi) is an Ethernet method (see paragraph 24).

For claim 12, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the received frame includes a frame header having a field representing that a payload of the frame is the control frame, a TDM (Time Division Multiplex) data frame, or an Ethernet data frame, thereby representing the payload type (see paragraphs 24-29 and 36).

For claim 13, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the frame includes a frame header having a field representing that a payload of the frame is the control frame thereby representing the payload type (see paragraph 36).

For claim 14, Harel et al. discloses an encapsulation method of traffic over a packet network the frame includes a frame header having a field representing that a payload of the frame is a TDM (Time Division Multiplex) data frame, thereby representing the payload type (see paragraphs 24-29).

For claim 15, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the frame includes a frame header having a field representing that a payload of the frame is an Ethernet data frame, thereby representing the payload type (see paragraph 24).

For claim 16, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the frame includes a frame header having a field representing that a payload of the frame is one of the control frame, a TDM (Time Division Multiplex) data frame, or an Ethernet data frame, thereby representing the payload type (see paragraph 25-29).

For claims 17 and 18, Harel et al. discloses an encapsulation method of traffic over a packet network comprising the steps of: i) check whether or not the received frame is an ATM (Asynchronous Transfer Mode) frame; ii) checking information about a payload type included in a header of the received frame as a checked result of step i), if the received frame is not the ATM frame; and iii) processing the received frame depending on the payload type of the received frame (see paragraphs 24-30). By checking whether the received frame is an ATM frame, the received frame can be easily treated as an error.

For claim 19, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the frame includes a frame header having a field representing that a payload of the frame is a control frame, thereby representing the payload type of the frame in the GEM frame header (see paragraph 36).



For claim 20, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the frame includes a frame header having a field representing that a payload of the frame is a TDM (Time Division Multiplex) data frame, thereby representing the payload type of the frame in the frame header (see paragraphs 25-29).

For claim 21, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the frame includes a frame header having a field representing that a payload of the frame is an Ethernet data frame, thereby representing the payload type of the frame in the frame header (see paragraph 24).

For claim 22, Harel et al. discloses an encapsulation method of traffic over a packet network wherein the frame includes a frame header having a field representing that a payload of the frame is one of: a control frame (see paragraph 36, a TDM (Time Division Multiplex) data frame (see paragraph 25-29), or an Ethernet data frame (see paragraph 24, thereby representing the payload type of the frame in the frame header (see paragraph 98).

For claims 1-22, Harel et al. disclose all the subject matter of the claimed invention with the exception that the received packet is a gigabit-capable passive optical network encapsulation method frame sent and received at an optical line termination (OLT) at an optical network terminal (ONT). Stiscia et al. from the same or similar fields of endeavor disclose a system and method for improved data protection in PONs that uses an OLT to receive data at an ONT (see paragraph 15). The system can be adapted to use a variety of gigabit capable passive optical networks and protocols (see paragraph 33). The system further comprises the capability to encapsulate and de-capsulate network traffic (see paragraph 37). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the system and

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method for improved data protection in a passive optical network using ONT to receive data at the OLT as taught by Stiscia et al. with the encapsulation method of traffic over a packet network as taught by Harel et al. The system and method for improved data protection in a passive optical network as taught by Stiscia et al. can be implemented with the encapsulation method of traffic over a packet network as taught by Harel et al. by combining the ONT and OLT as taught by Stiscia et al. with the integrated transport device (ITD) as taught by Harel et al. The motivation for using the system and method for improved data protection in a passive optical network using ONT to data at the OLT as taught by Stiscia with the encapsulation method of traffic over a packet network as taught by Harel et al. is to improve the data protection of passive optical networks transporting a variety of traffic such as TDM, Ethernet, or control frames.

### *Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Constant Six et al. (U.S. Patent Application Publication 2003/02199015) and Masucci et al. (U.S. Patent 6,498,667) are cited to show subject matter that is considered pertinent to the claimed inventions.

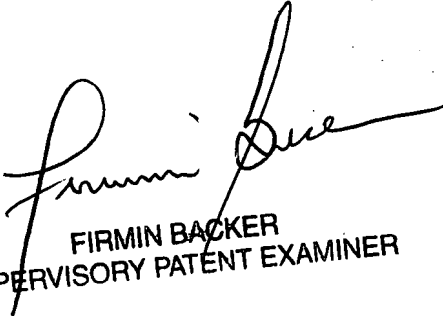
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben H. Liu whose telephone number is (571) 270-3118. The examiner can normally be reached on 9:00AM to 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BL



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SUPERVISORY PATENT EXAMINER